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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/275,568
Filing Date: March 24, 1999
Appellant(s): PITMAN ET AL.

Michael Buchenhomer, Reg. No. 33,152
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 21, 2006 appealing from the Office action mailed June 29, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

The proposed amendment filed with the Appeal Brief, July 21, 2006, has been entered because said amendment does not change the scope of the claims on appeal. Therefore, Claims 34 and 35 have been canceled.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment filed with the Appeal Brief on July 21, 2006 has been entered.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: On page 5, Item V, Appellant's brief presents arguments relating to an "objection to the amendment of September 14, 2004 under 35 USC

132(a) as introducing new matter" to the specification. This issue relates to petitionable subject matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP § 1002 and § 1201. Further, the objection has been withdrawn in the Office Action, mailed September 15, 2005.

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

The 35 U.S.C. 112, first paragraph, new matter rejection has been withdrawn because arguments and pointed support presented by Appellant are deemed to be persuasive. Appellant does not specifically argue the merits of said rejection as directed to claim 8, lines 4-5, the limitation of "T indicates a transpose...representing covariance." However, the rejection directed to claim 8 has been withdrawn because the specification provides written support, as originally filed, on page 8, lines 1-5, and page 12, lines 19-21. Further, the rejection directed to claims 34 and 35 has been withdrawn because the amendment, wherein claims 34 and 35 have been cancelled, filed with the Appeal Brief on July 21, 2006 has been entered.

The 35 U.S.C. 112, second paragraph, rejection, directed to claims 8, 9, and 12-14, has been withdrawn because arguments, pointed support, and Exhibits A and B presented by Appellant are deemed to be persuasive.

Therefore, the grounds of rejection to be reviewed on appeal are:

35 USC 101, nonstatutory rejection, as directed to claims 1, 4-15, and 31-33, and

35 USC 102(e)(2) as being anticipated by Platt et al. (US 5784294 A), as directed to claims 1, 4, and 5.

(7) Claims Appendix

A substantially correct copy of appealed claims appear on pages 17-21 of the Appendix to the appellant's brief. The minor errors are as follows: The proposed amendment filed with the Appeal Brief, July 21, 2006, has been entered. The claims to be considered on Appeal are claims 1, 4-15, and 31-33.

(8) Evidence Relied Upon

5784294	PLATT	7-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

CLAIM REJECTIONS UNDER 35 U.S.C. § 101

1. Claims 1, 4-15, and 31-33 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

BASIS FOR REJECTION

2. Claims 1, 4-15, and 31-33 are rejected because said claims are directed to a method comprising steps for manipulating data without producing any physical transformation, which is considered to be non-statutory subject matter. "For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory. However, a claimed process for digitally filtering noise employing the mathematical algorithm is statutory." (MPEP § 2106 (IV)(B)(2) (b), part ii). As evidenced by claims 8-15, the instant invention comprises merely algorithmic steps for manipulating descriptor data without producing any physical transformation.

3. As supported by the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, 1300 Off. Gaz. Pat. Office 142 (November 22, 2005) (accessible on-line at www.uspto.gov/go/og/2005/week47/patgupa.htm), a process that does not result in physical transformation may nonetheless be statutory if it achieves a useful, concrete and tangible result. However, there is insufficient reflection in claim 1 of the practical utility or utilities in the description that relates to improvements in molecular structure similarity searching and retrieval. In the "wherein" clause, the key is recited as "indexes the entry for retrieval thereof." This represents an intention and no retrieval or even searching is required to be performed. Therefore, there is no useful result produced according to the standard in the Interim Guidelines.

RESPONSE TO ARGUMENTS

4. On pages 6-9, Appellant cites AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2D 1447 (Fed. Cir. 1999) to support that the claimed invention "fall[s] within the process category of the four enumerated categories of patentable subject matter in 101." Further, Appellant argues that the claimed invention results in a practical application. It is noted that the claimed invention directed to a method (process). Further, AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2D 1447 (Fed. Cir. 1999) supports a process comprising a mathematical algorithm that brings about a useful application is statutory. However, there is insufficient reflection in claim 1 of the practical utility or utilities in the description that relates to improvements in molecular structure similarity searching and retrieval. In the "wherein" clause, the key is recited as "indexes the entry for retrieval thereof." This represents an intention and no retrieval, or even searching is required

to be performed. Therefore, there is no useful result produced according to the standard articulated in AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2D 1447 (Fed. Cir. 1999).

5. On pages 7-8, Appellant cites In re Lowry, 32 F. 3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994) to argue that "storage, use and management of information residing in a memory were entitled patentable weight." It is noted that the last two lines of claim 1 recite "storing said entry in a memory..." which has been reasonably construe as producing a tangible result. As discussed above, there is no useful result produced according to the standard articulated in AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2D 1447 (Fed. Cir. 1999).

6. On pages 9-10, Appellant argues that the "Federal Circuit rejected an argument similar to the Examiner's Arrhythmia Research Technology...where processing information describing a patient's heartbeat was held to be statutory subject matter." It is noted the patient's heartbeat data cited in Arrhythmia Research Technology court decision comprises signals corresponding to physical objects or activities external to the computer system, and where the process causes a physical transformation of the signals which are intangible representations of the physical objects or activities. As evidenced by claims 8-15, the instant invention comprises merely algorithmic steps for manipulating descriptor data without producing any physical transformation. Further, there is no useful result produced according to the standard articulated in AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2D 1447 (Fed. Cir. 1999).

CLAIM REJECTIONS UNDER 35 U.S.C. § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

8. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(a) and 102(e)(2) as being anticipated by Platt et al. (US PN 5,784,294A).

BASIS FOR REJECTION

9. Platt et al. discloses a system and method for generating a set of attributes (entry) of a molecule derived from data representing the atomic structure of said molecule to be stored in memory (Abstract etc. and column 5, lines 11-14). For example, the IMIDAZOLE (identifier) molecule with data representing at least one region stored in memory. The data are characterized by the axis of rotation and the principal axis is determined by the weight distribution and shape of the tire/wheel combination (column 6, lines 1-67). "For the IMIDAZOLE molecule d...the coordinates of the center of dipole may be determined by adding the vector displacement d to the coordinates (column 11, lines 21-25), as in instant claim 1, lines 1-8.

10. A set of physical attributes that describe a molecule may be determined from data representing the atomic structure of the molecule as stored in the memory. The method determines the moment of inertia of a molecule and the charge distribution of the molecule, and how these attributes can be mapped to descriptors that are used to compare molecules, for example, in 3-DQSAR calculations (column 5, lines 10-25). The method of Platt et al. is directed to first determine the attributes based on moment of inertia and charge distribution

(preselected criteria) and secondly determine how the attributes map to vector descriptors that are used to compare molecules (column 5, lines 14-25 and 45-52). The shape and charge descriptors of the molecule may be stored in a molecular database and retrieved therefrom (column 16, lines 4-7). It is noted the key and key indexes associated with molecule stored in a molecular database are inherent features of the molecular database designed for retrieval cited above, as in instant claim 1, lines 9-12.

11. The inclusion of a text reference by Ramakrishnan is not being used as prior art but only to support the inherent features of databases above that are well known in the art. Ramakrishnan discloses that the use key and search key for index is well known in the database literature (page 72, §4.2.3, lines 1-9). Further, the key and index functions are routine features of databases in general (pages 28, 29, and 57-59).

12. The data are characterized by the axis of rotation and the principal axis is determined by the weight distribution and shape of the tire/wheel combination (column 6, lines 1-67), as in instant claim 4.

13. "The descriptors may be divided into two groups: a first group related to the inertial coordinate system defined by the inertial axes x,y,z, and a second group related to the coordinate system defined by the axes q1,q2,q3" (column 12, lines 31-36) which represent descriptor vectors, as in instant claim 5.

RESPONSE TO ARGUMENTS

14. On pages 10-11, Appellant argues that the pointed citations in Platt et al. do not describe "any of the claimed methods." For example, Applicant asserts that Examiner cited Fig. 9 and Claim 34, Lines 39-42 wherein said citation do not anticipate the claim invention. The pointed to citations of Fig. 9 and Claim 34, Lines 39-42 have not been cited by Examiner in the Final Office, mailed June 29, 2005. Therefore, Appellant's argument directed to said citations is not persuasive.

15. Specific to Appellant's argument that "Platt does not disclose the required mapping, generation of a key, or storing the entry is required by amended claim 1", Platt et al. discloses a set of physical attributes that describe a molecule may be determined from data representing the atomic structure of the molecule as stored in the memory. The method determines the moment of inertia of a molecule and the charge distribution of the molecule, and how these **attributes can be mapped to descriptors that are used to compare molecules**, for example, in 3-DQSAR calculations (column 5, lines 10-25). The method of Platt et al. is directed to first determine the attributes based on a moment of inertia and a charge distribution (preselected criteria) and secondly determines **how the attributes map to vector descriptors that are used to compare molecules** (column 5, lines 14-25 and 45-52). The shape and charge descriptors of the molecule may be stored in a molecular database and retrieved therefrom (column 16, lines 4-7). It is noted the key and key indexes associated with molecule stored in a molecular database are inherent features of the molecular database designed for retrieval discussed above.

16. Specific to the argument that limitation of "storing", Platt et al. discloses the shape and charge descriptors of the molecule may be **stored in a molecular database and retrieved therefrom** (column 16, lines 4-7).

17. Specific to the limitation of "key", it is noted the key associated with molecule stored in a molecular database is an inherent feature of the molecular database designed for retrieval as support by the citation above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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